

The Claims Defining the Invention are as Follows

1. Apparatus for lining an internal surface of a conduit, comprising a body adapted to be progressively moved along the conduit for installing a flexible tube structure onto the internal surface, the flexible tube structure undergoing eversion within the conduit, the body presenting a contact surface against which the tube acts during eversion thereof.
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2. Apparatus according to claim 1 wherein the contact surface has means for delivery of an agent to the everting portion of the tube structure.
3. Apparatus according to claim 2 wherein the means for delivery of the agent
10 comprises a plurality of ports in the contact surface, the ports communicating with a supply of the agent.
4. Apparatus according to claim 3 wherein the contact surface is defined by a plate having apertures therein incorporating the ports.
5. Apparatus according to any one of claims 1 to 4 wherein the plate is rigidly
15 supported.
6. Apparatus according to any one of claims 1 to 4 wherein the plate is elastically supported.
7. Apparatus according to any one of the preceding claims wherein the agent
comprises a curable resin and the tube structure comprises a resin absorbent
20 material.
8. Apparatus according to claim 7 wherein the plate has a face defining the contact surface and an opposed face thereof providing a boundary for a resin chamber from which resin may be delivered to the contact face by way of the apertures therein.

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9. Apparatus according to claim 8 wherein the body has provision for applying resin to the surface onto which the liner is presented.
10. Apparatus according to claim 9 wherein the body comprises a circumferential chamber which is exposed to the surface and which contains resin which is wiped on the surface.
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11. Apparatus according to claim 10 wherein the circumferential chamber is defined between two spaced apart seals for sliding and sealing contact with the surface, and an inner wall extending between the two seals.
12. Apparatus according to claim 11 wherein the inner wall is defined by a flexible membrane.
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13. Apparatus according to claim 10, 11 or 12 wherein the body further comprises one or more additional chambers one adjacent another axially spaced along the body.
14. Apparatus according to any one of the preceding claims wherein the body incorporates a leading section for performing preparatory work on the interior surface of the conduit.
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15. Apparatus according to any one of the preceding claims wherein the forward portion of the apparatus incorporates a collection means for collecting debris within the conduit prior to installation of the liner.
- 20 16. Apparatus according to any one of the preceding claims wherein the tube structure is delivered to the body in a collapsed condition.
17. Apparatus according to claim 16 wherein the tube structure is opened during eversion thereof.
18. Apparatus according to claim 16 or 17 wherein the collapsed condition
25 involves at least one re-entrant fold.

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19. Apparatus according to claim 16, 17 or 18 wherein an installation cable is provided in the collapsed tube structure for assisting axial movement thereof while in the collapsed condition.
20. Apparatus according to any one of claims 16 to 19 further comprising means for establishing a "wet-out" region within the collapsed tube structure prior to eversion thereof.
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21. Apparatus according to claim 20 wherein said means comprises a lance structure projecting outwardly of the contact surface and terminating at a free end, with the collapsed tube structure embracing the lance structure so that the lance structure is inserted in the tube structure as it approaches the contact face for eversion thereagainst.
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22. Apparatus according to claim 21 wherein the free end of the lance structure is configured to spread the collapsed wall of the tube structure to create a cavity to receive the resin.
- 15 23. Apparatus according to any one of the preceding claims wherein the body is caused to move along the conduit under the application of a driving force.
24. Apparatus according to claim 23 wherein the driving force comprises pressure applied to the body through the everting tube structure.
25. Apparatus according to claim 24 wherein the driving force further comprises a towing force applied to the body.
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26. Apparatus according to claim 22, 23 or 24 further comprising means for applying a retarding force to the body to hold up a column of fluid within the resin pressure chamber.
27. Apparatus according to claim 26 wherein the retarding force is applied by way of a brake sled operatively connected to the body and in friction engagement with the interior surface of the conduit.
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28. Apparatus for lining a conduit comprising a body adapted to be progressively moved along the conduit for installing a flexible liner onto the interior surface of the conduit or any substrate applied thereto, the flexible liner comprising a tube structure undergoing eversion within the conduit, the tube comprising resin absorbent material, the body presenting a contact surface against which the tube structure acts during eversion thereof, the contact surface having means for delivery of a curable resin to the everting portion of the tube structure.
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29. A method of lining a conduit utilising apparatus according to any one or more of the preceding claims.
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30. A method of lining a conduit comprising: providing a tube as a liner for the conduit, evertng the tube into the conduit whereby the tube has an inner tube portion, an outer tube portion and an everting portion extending between the inner and outer tube portions; causing the exposed face of the everting portion of the tube to slidably engage a contact surface at which a curable resin is presented to the everting face for impregnation thereof.
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31. A method according to claim 30 further comprising sensing and/or monitoring selected conditions associated with installation of the liner and varying the installation process as necessary in response to such conditions.
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32. A tube structure characterised in that the tube structure has a collapsed condition involving at least one re-entrant fold formed therein and extending longitudinally thereof.
33. A tube structure according to claim 32 further comprising a cable provided in and extending axially along the collapsed tube structure.
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34. Apparatus for lining a conduit substantially as herein described with reference to the accompanying drawings.
35. A method of lining a conduit substantially as herein described.

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36. A collapsed tube structure substantially as herein described with reference to the accompanying drawings.